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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,778	03/24/2004	Baokang Bi		2777

41145 7590 11/29/2005

BAOKANG BI  
3928 EAST SUNWIND DRIVE  
OKEMOS, MI 48864

EXAMINER

RUTLEDGE, DELLA J

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/708,778	<b>Applicant(s)</b> BI, BAKANG	
	<b>Examiner</b> D. Rutledge	<b>Art Unit</b> 2851	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because of undue length. The abstract must be no more than 150 words. Correction is required. See MPEP § 608.01(b).
2. The disclosure is objected to because of the following informalities: the pages of the specification including claims and abstract must be numbered consecutively starting with the number 1; the numbers should be centrally located above or preferably below the text. See MPEP § 608.01(5).

Appropriate correction is required.

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Drawings***

4. The drawings filed 24 March 2004 are acceptable for examination.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 5 – 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith (US Pat. No. 5,900,637).

Smith has zone plates having a Fresnel lens. The applicant has stated that his zone plates are different from these types of zone plates and has advantages over them, but the claims must be structured so as to clearly identify those differences.

7. Claims 1, 3 – 5, 7 - 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Gil et al. (US Pub. No. 2004/0124372).

Gil et al. have an imaging generating system comprising a maskless lithographic apparatus using zone plates that provide an array of focal spots for exposing a photosensitive substrate. The zone plates may have diffractive and/or refractive magnifying elements. The focusing elements may include Fresnel zone plates, blazed Fresnel zone plates, Bessel zone plates, photon sieves, phase photon sieves, and apodized diffractive focusing elements. The smallest possible focal spot can be achieved with such elements. Shutter devices may be included in the apparatus near the diffractive elements 10. The substrate 24 is scanned under the array of elements. See Fig. 1. Collecting the non – focused light and controlling the focused light as claim is common method when using zone plates.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 – 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gil et al. (US Pub. No. 2004/0124372).


Gil et al. does not provide many details about the optical system, but one of ordinary skill in the art would know the types of photosensitive materials that can be exposed by the array; components necessary for color images; how to scan the image to write it onto the substrate; how to control light to be projected for writing and light to be collected. One of ordinary skill in the art having the teaching of the zone plates as disclosed by the reference would be able to arrive at the arrangements claimed without undue experimentation since maskless lithography using zone plates is already known.

***Response Data***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Rutledge whose telephone number is (571) 272-2127. The examiner can normally be reached on Mon - Thurs, 6:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
D. Rutledge  
Primary Examiner  
Art Unit 2851

dr  
11/28/05